Physicians' Exercise Habits

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SUMMARY

We distributed a questionnaire on personal exercise profiles, attitudes toward exercise, and counseling behavior to a random sample of 200 Vancouver general practitioners. Of the respondents, 39.1% met American College of Sports Medicine guidelines. Personal attitudes influenced counseling practices. Physicians believed that exercise was important and were prepared to counsel, but considered themselves only somewhat successful at changing patients' behavior.

RÉSUMÉ

Deux cents médecins de famille de la région de Vancouver, assignés par randomisation, ont reçu un questionnaire portant sur leur profil, leur comportement comme conseiller et leurs attitudes personnelles face à l'exercice. De tous les répondants, 39.1% répondaient aux critères de l'American College of Sports Medicine. Les attitudes personnelles influencent la pratique du "counseling". Les médecins croient en l'importance de l'exercice et se disent prêts à prodiguer des conseils mais considèrent que leur taux de réussite à changer le comportement des patients est plutôt mitigé.

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PERHAPS THE BEST KEPT SECRET in preventive medicine today is exercise.[1] Medical students spend a great deal of time on the pathological basis of disease, but little time on the principles of exercise and its role in health promotion. Important medical texts devote few pages to the principles and practice of exercise and often fail to cite lack of exercise as a risk factor for coronary artery disease (CAD).[2]

Exercise has been proven beneficial in a number of extremely prevalent diseases: CAD, hypertension, obesity, non-insulin-dependent diabetes mellitus, osteoporosis, and psychological dysfunction.[3] Studies have consistently shown an inverse relationship between physical activity and the risk of CAD.[4-6] Paffenbarger and colleagues[6] have reported a 31% higher risk of cardiovascular mortality in physically inactive men, independent of other CAD risk factors. Exercise has been shown to be of benefit in lipid control and obesity.[7,8] Hypertension is reported to improve 10 mm Hg, on average, with regular exercise.[9] Habitual exercise has also been shown to increase insulin sensitivity and glucose clearance.[10] Its role in reduction of post-menopausal bone loss, particularly in combination with calcium replacement, is well established.[11,12] Whether it reduces the incidence of fractures is yet to be proven. Finally, exercise is often said to heighten mood and improve self-esteem.[13]

Just how much exercise is beneficial and will result in cardiovascular benefits? The guidelines of the American College of Sports Medicine (ACSM), which are widely accepted, call for three to five 20- to 60-minute exercise sessions each week, at moderate intensity (ie, a heart rate between 120 and 150 beats/min).[14] Many authors believe that lower levels of exercise are still of benefit.[15,16]

Our patients look to the medical profession for leadership. Moreover, some studies suggest that physicians' personal health habits influence the counseling they give to their patients.[17] Thus, this study was designed to examine the exercise habits of a group of primary care physicians in the city of Vancouver, BC. We were interested in knowing whether they exercised enough for cardiovascular benefit and, if not, why not; whether they were counseling their patients about exercise; and what factors influenced their counseling behavior.

METHODS

We sent a one-page survey to a random sample of 200 Vancouver primary care physicians (general practitioners and members

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of the College of Family Physicians of Canada) drawn from the 1990 Directory of the British Columbia College of Physicians and Surgeons.

The survey addressed three main areas: 1) demographics, 2) physician's exercise profile, and 3) counseling behavior. Non-responders were reminded by phone once. After we had excluded physicians who had retired or moved out of the province, 176 physicians remained. Of these, 115 completed the questionnaire, for a 65.3% response rate.

Statistical methods included the paired *t* test and χ^2 analyses; a *P* value less than 0.05 was considered significant. A copy of the questionnaire is available upon request.

Table 1. **DEMOGRAPHICS OF STUDY SAMPLE**

CHARACTERISTIC	Mean	Range
Age	42.7	27-76
Weight (kg)	73.5	46.8-104.4
Height (cm)	175	152.4-198.1
Years since medical school graduation	16.0	3-43
Hours of patient contact weekly	40.7	8-70

RESULTS

Physicians were asked about the frequency, intensity, and duration of their exercise (*Tables 1 and 2*). The largest number exercised one to two times per week (42/115, or 36.5%), with three to five times per week a close second (41/115, or 35.7%). Only 14.8% (17/115) reported exercising more than five times per week; 13% (15/115) did not exercise at all. Most physicians exercised at a moderate intensity (65/99, or 65.7%). The mean duration of each exercise session was 49.1 minutes, with a large standard deviation of 31.0 minutes. The range was also large, at 10 to 240 minutes (the latter for a rock climber).

Only 39.1% (45/115) of these physicians actually met the ACSM guidelines for adequate amounts of exercise. But even some of these respondents felt they would like to exercise more. More than 80% (95/115) cited barriers to exercise.

Only 28.9% (33/114) of physicians thought they were exercising enough. The most commonly cited "excuses" (more than one was allowed) were time (76/95, or 80%), family commitments (21/95, or 22.1%), laziness (15/95, or 15.8%), and fatigue (14/95, or 14.7%).

To examine the validity of these excuses, we compared physicians who met ACSM criteria for exercise amounts with those who did not. There were no significant differences ($P < 0.05$) in their weights, in the proportions of male and female subjects, in the presence of children at home, nor in the number of patient contact hours per week. There was a significant difference ($P < 0.05$) in mean ages (45 years for the nonexercisers versus 39 years for the exercisers), marital status (55/68, or 81%, of the nonexercisers were married versus 27/44, or 61.4%, of the exercisers) and years from graduation (18 years for the nonexercisers versus 13 years for the exercisers). Three of the 115 respondents did not state their sex or marital status.

Next, we looked at the physicians' attitudes toward exercise and their counseling habits. Most physicans surveyed (97/115, or 84.3%) believed exercise was very important to overall health. However, fewer than half of these physicians (43/97, or 44.3%) exercised to ACSM criteria themselves. When asked, "On initial health assessments do you ask your patients about their exercise habits all of the time, some of the time, seldom, or never?" 92.9% (105/113) responded that they asked their patients all or some of the time. These counseling practices did not seem to depend on whether the physicians themselves exercised to recommended amounts. Attitude did, however, make a significant difference. Physicians who believed exercise was very important to overall health inquired more often about exercise habits on initial visits than physicians who did not consider exercise very important (55/95, or 57.9%, versus 5/18, or 27.8%, $P = 0.035$).

Most physicians considered themselves at least somewhat prepared (55/113, or 48.7%) or very prepared (57/113, or 50.4%) to counsel about exercise. They believed exercise was very useful (86/114, or 75.4%) or at least somewhat useful (27/114, or 23.7%) as a therapeutic tool.

Very few physicians (1%) believed exercise was not a useful tool at all. The conditions for which exercise was prescribed were, in decreasing rank order, obesity, cardiovascular disease, psychiatric illness, stress, and musculoskeletal disorders.

Physicians were not, however, optimistic about changing their patients' exercise behavior. Only 5.3% (6/113) of physicians believed they were very successful in changing patients' exercise behavior. Most believed they were only somewhat successful (90/113, or 79.6%) or not at all successful (17/113, or 15.0%). Stumbling blocks to change cited were patients' unwillingness to make lifestyle change (44/103, or 42.7%), patients' lack of motivation (40/103, or 38.8%), and physicians' lack of time to adequately counsel patients.

Finally, we asked what might help physicians change their patients' exercise behavior. Suggestions included literature for patients, information on where to refer patients, support staff training, continuing medical education, and remuneration for counseling. Most physicians believed that some forms of assistance were at least somewhat useful. They ranked literature for patients as the greatest assistance (36/94, or 38.3%) and financial remuneration for counseling as the least help (12/94, or 12.8%).

DISCUSSION

Despite the proven benefits of exercise, physicians themselves are not exercising enough.[17-19] A survey of Harvard Medical School faculty in 1982 reported that less than half the faculty were exercising 1 hour weekly.[18] Californian doctors fared no better; 73% of doctors reported doing less than 1 hour of strenuous exercise weekly.[17] A study of Massachusetts doctors found that only 27% rated exercise as very important for promoting health, and only 47% routinely asked about exercise.[19]

In this study, only 39.1% of Vancouver primary care physicians exercised enough to result in health benefits, by the guidelines recommended by the ACSM. They fared better than the American doctors in the studies mentioned,[17-19] but only slightly better than Saskatchewan physicians in a recent study of all types of practice.[20] Using Canada Health Survey[21] methods to quantify habitual physical activity, the Saskatchewan study group found only 30% of the physicians surveyed were active enough to maintain good fitness compared with 39% of the general population and 46% of subjects in professional occupations.[20,21] We suspect that the non-responders to our survey and to the Saskatchewan survey were more likely to be nonexercisers, and thus we suspect the true percentage of exercising physicians to be even lower.

Table 2. **RESPONDENT CHARACTERISTICS**

CHARACTERISTIC	%
SEX	
Men	72.3
Women	27.7
HOUSING	
Living alone	26.8
Living with someone	73.2
CHILDREN	
Childless	41.6
With children	58.4

Those physicans who did exercise adequately were more apt to be young, single, and fairly recent graduates. These findings contrast with those of the Saskatchewan study, in which 24- to 44-year-olds exercised the least.[20] Perhaps the explanation for the difference is that the Saskatchewan study included interns and residents, who have little free time. We hope that our results point to a new and healthier trend being set by younger family physicians. The demanding and busy life of a physician with no extra time to exercise did not hold up as a valid excuse; exercisers did not work longer hours than nonexercisers, and many busy physicians are physically fit.[22]

It is encouraging that most primary care physicians did believe exercise was very important for health promotion and did inquire about exercise habits all or some of the time. Physicians' own exercise habits did not appear to influence their counseling behavior, but their attitudes about the importance of exercise did. Although

physicians considered themselves prepared to counsel about exercise and use it as a therapeutic tool, they believed their efforts were only somewhat successful in effecting change, and some believed they were not successful at all (15.0%). This response reflects the difficulty in changing any poor health habit, such as obesity, smoking, or alcohol.

Our patients look to us as role models for adopting a healthier lifestyle. We have led the way against cigarette smoking,[23] but we are falling short in the area of exercise. Without education about the value of exercise, the proper prescription of exercise, and the strategies for effective behavioral change, physicians are left to their own devices. The physicians surveyed seemed at least somewhat prepared to get help with exercise counseling. It is interesting to note that the cheapest route of assistance (literature for patients) was the most accepted.

CONCLUSION

Most Vancouver primary care physicians do have a strong interest and belief in the value of exercise. To improve the situation, physicians must continue to learn about exercise benefits and about exercise prescription, and they must learn better strategies for effective behavior modification. Finally, physicians must practise what they preach and preach what they practise. ■

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References

1. Simon HB. Physician-al fitness: setting an example. *Physician Sport Med* 1989;17(10):45-8.
2. Report of the National Cholesterol Education Program expert panel on detection, evaluation, and treatment of high blood cholesterol in adults. The expert panel. *Arch Intern Med* 1989;149(3):505-10.
3. Exercise counseling. In: *Guide to clinical preventive services. Report of the U.S. Preventive Services Task Force.* 1981:198-202.
4. Leon AS, Connett J, Jacobs DR, Rauramaa R. Leisure-time physical activity levels and risk of coronary heart disease and death. The multiple risk intervention trial. *JAMA* 1987;258:2388-95.
5. Kannel WB, Wilson P, Blair SN. Epidemiological assessment of the role of physical activity and fitness in the development of cardiovascular disease. *Am Heart J* 1985;109:876-85.
6. Paffenbarger RS Jr, Hyde RT, Wing AL, Chung-Cheng H. Physical activity, all-cause mortality, and longevity of college alumni. *N Engl J Med* 1986;314:605-13.
7. Wood PD, Haskell WL, Blair SN, Williams PT, Krauss RM, Lindgren FT, et al. Increased exercise level and plasma lipoprotein concentrations: a one-year, randomized, controlled study in sedentary, middle-aged men. *Metabolism* 1983;32:31-9.
8. Epstein LH, Wing RR. Aerobic exercise and weight. *Addict Behav* 1980;5:371-8.
9. Bouchard C, Shephard RJ, Stephens T, et al, editors. *Exercise, fitness and health: a consensus of current knowledge. The International Conference on Exercise, Fitness and Health.* Champaign, Ill: Human Kinetics Publishers, 1990.
10. Raurama R. Relationship of physical activity, glucose tolerance and weight management. *Prev Med* 1984;13:37-46.
11. Smith EL, Reddan W, Smith PE. Physical activity and calcium modalities for bone mineral increase in aged women. *Med Sci Sports Exerc* 1981;13:60-4.
12. Krolner B, Toft B, Nielson SP, Tondevold E. Physical exercise as prophylaxis against involutional vertebral bone loss: a controlled clinical trial. *Clin Sci* 1983;64:541-6.
13. Hughes JR. Psychological effects of habitual aerobic exercise: a critical review. *Prev Med* 1984;13:66-78.
14. American College of Sports Medicine. *Guidelines for graded exercise testing and exercise prescription.* Philadelphia, Pa: Lea & Febiger, 1975.
15. Magnus K, Matroos A, Strackee J. Walking, cycling, gardening with or without seasonal interruption in relation to acute coronary events. *Am J Epidemiol* 1979;110:724-33.
16. Haskell WL, Montoye HJ, Orenstein O. Physical activity and exercise to achieve health-related physical fitness components. *Public Health Rep* 1985;100:202-12.
17. Wells KB, Lewis CE, Leake B, Ware JE Jr. Do physicians preach what they practice? A study of physicians' health habits and counseling practices. *JAMA* 1984;252:2846-8.
18. Personal health practices. How do you compare to the Harvard Medical School Faculty? *Harvard Med School Health Lett* 1982;7(9):1-6.
19. Wechsler H, Levine S, Idelson RK, Rohman M, Taylor JO. The physician's role in health promotion - a survey of primary care practitioners. *N Engl J Med* 1983;308:97-100.
20. Gaertner PH, Firor WB, Edouard L. Physical inactivity among physicians. *Can Med Assoc J* 1991;144:1253-6.
21. Canada Health Survey. *The health of Canadians: report of the Canada Health Survey.* Ottawa, Ont: Department of National Health and Welfare, 1981.
22. Darge LL, Lucas CP, Spafford TR, Schork AM, Illis WR, Holden N. Endurance training in middle-aged male physicians. *Physician Sportsmed* 1989;17(7):85-101.
23. Sullivan P. Most doctors have butted out, initial CMAJ survey shows. *Can Med Assoc J* 1988; 138:160.